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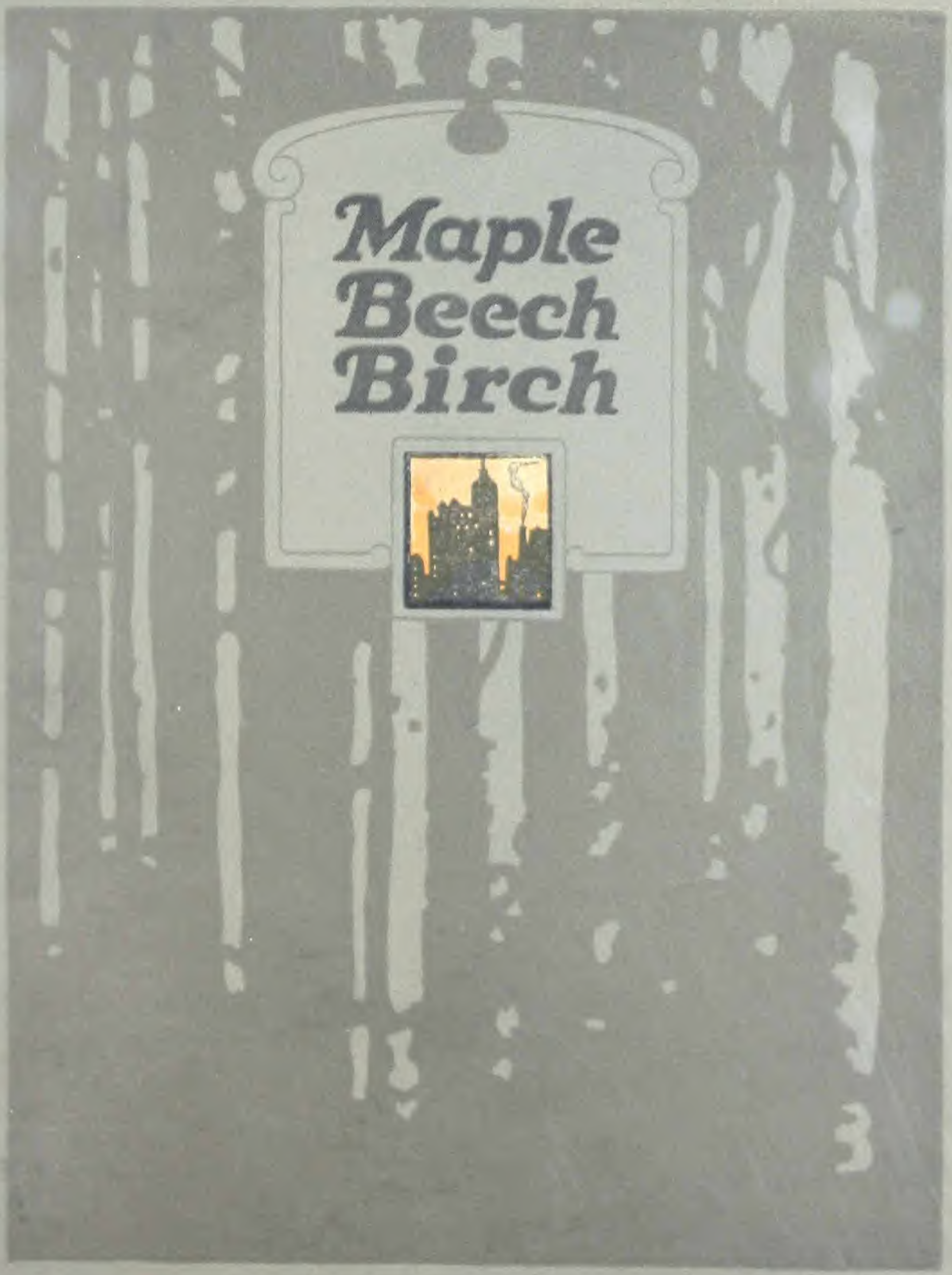
FLOORING



Maple Beech Birch

"Maple, Beech, and Birch—these gay, deciduous, forest neighbors—are
but holy hymns and madrigals"—Oliver Wendell Holmes

FLOORING
of Maple, Beech and Birch

As Standardized and Vouched for by

MAPLE FLOORING MANUFACTURERS ASSOCIATION

Stock Exchange Building – Chicago

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TO establish and enforce uniform grades and standards of products; to constantly improve methods of manufacture; to make the Association Trademark the symbol of excellence in methods and materials; to provide architect, dealer, and builder with an organized and always available guaranty of Quality; to protect the integrity of the product and stimulate its more intelligent and economical use; and to stabilize and improve the industry in all its activities—these are the essential purposes of the Maple Flooring Manufacturers Association.

The Architect's Approval

THE great general public of consumers—the people who build homes, schools, factories, stores, and theatres—as well as the manufacturers of Maple, Beech, and Birch flooring owe the architects of America a debt of gratitude for the service they have rendered in giving these floors their rightful rank and place.

This book has been prepared with the thought that it may in some measure serve the members of this profession in their work with their clients; also that it may make it easier for the architect to secure that quality of co-operation on the part of his clients that will make his flooring recommendations more intelligently understood. Certainly it is intended to give to the architect's clients the information and instruction concerning the treatment and care of these floors which will increase their appreciation, insure their proper protection, enhance their natural beauties, and add to the length and acceptability of their service.

It is with this purpose of helpfulness distinctly in mind that this book has been prepared. Its general use by architects in their professional relations with clients will be the highest approval which it can possibly receive.

A Perfect Product

AFTER visiting several Maple flooring mills and scrutinizing the process of manufacture from the log to the shipping platform, a trained industrial investigator made these significant remarks:

"Maple flooring seems to me a perfect product. Strictly speaking, perfection is not a relative term and perhaps no product is perfect in that positive and unqualified sense. But common custom permits a little flexibility in the use of this word, a slight sense of comparison, an implication of the relative instead of the rigid and absolute. In this sense, I stick to the statement that Maple flooring is a perfect product.

"No man can make the rounds of the Maple flooring mills as I have made them and follow every process of manufacture from beginning to end, from Nature's raw material to the finished thing fitted for man's use, without carrying with him the profound conviction that there is not on the market today a product that carries a higher percent of honesty and value than Maple flooring.

"If I were looking for a product with which to illustrate integrity in material, in treatment, and in commercialization, Maple flooring would be my choice. What I have seen with my own eyes—and they are obliged to observe hundreds of different manufacturing processes—leaves me with the feeling that here is a product that is protected at every stage of its development; that it is not cheapened or slighted in any particular; that it is consistently subjected to a quality pressure at every point of its evolution, and that when its physical development is completed and it is a finished product, its manufacturers still extend the same intelligent care and protection to its commercial distribution that they have given to its treatment in the mills.

"It is one thing to make a product honestly, economically, and intelligently and drop the sense of responsibility at the shipping platform, leaving the details of distribution and the satisfaction of the consumer to the dealers, but it is quite another thing to follow that product with a protective chain of responsibility. No product can be called perfect which is not marketed under the same responsibility that has governed and protected its manufacture.

"One reason why Maple flooring is entitled to be called an ideal product is because it is so marketed that the consumer may know precisely what he is buying and the exact difference between the various grades. Of how many articles on the market may this be said with entire accuracy?

Of course I am speaking of the flooring made by members of the Maple Flooring Manufacturers Association and graded and sold under its system which identifies every shipment with its stamp of organized responsibility. I know nothing about any other output of this product and would be at a loss to understand why any consumer would buy any other when he could get that which carries with it the badge of responsibility of a great organization.

"Close scrutiny of every process entering into the manufacture of Maple flooring and a careful examination of the work of its grading, standardization, and distribution has left with me the indelible impression that there is not on the market today a sounder, worthier product or one better worth the money and surer of giving permanent satisfaction in actual service.

"The trimming saw commands respect for the product. I'll challenge any wide-awake man to watch a Maple flooring trimmer work for an hour without feeling that the man is striving to secure perfection in the product, clipping out sections of strips where the imperfections are so slight as to be unseen by the layman's eye and apparently sacrificing lengths of clear and beautiful stuff for trifling and inconsequential defects.

"Then the men at the grading table are constantly indulging in a hesitation that is eloquent of quality in the standardized product. I've been fascinated by their work. The longer I observe them, the more I'm impressed with the fact that they consistently give the lower grade the benefit of the doubt. In other words, a piece which does not carry on its face a legible title to place in the No. 1 grade, for example, is tossed into the "Factory" rack, as a usual thing, after the grader has given it an instant's extra examination.

"Then, too, the supervisory work of the traveling inspector and the care with which he oversees the manufacture and grading of the flooring carried conviction to me that quality is a system in this line of production."

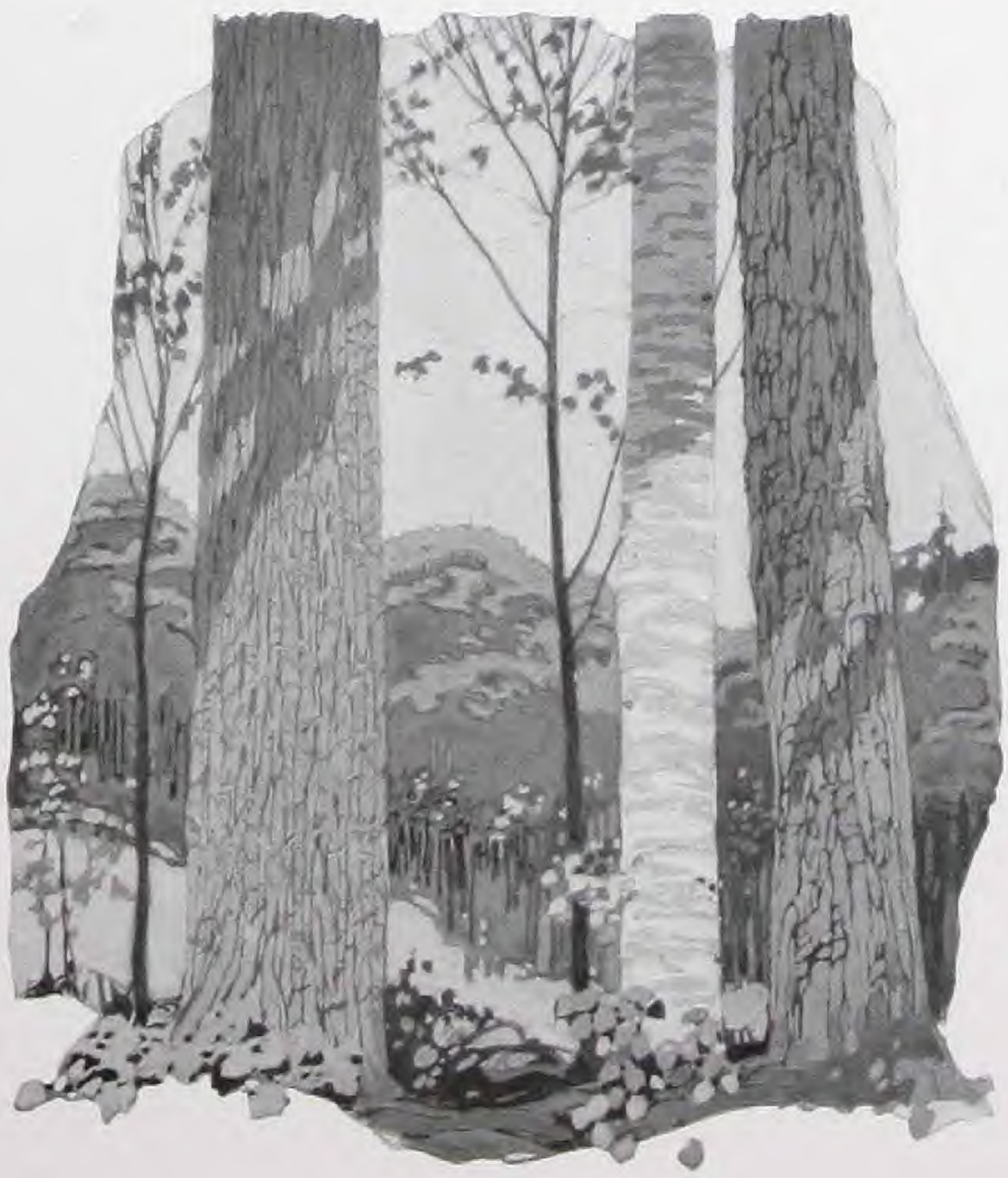
Service and the Hardwood Flooring Sisters

SERVICE is about as broadly abused a word as the English language can boast of, but the definition which a Maple, Beech, or Birch floor gives to this term lifts it out of trivial and ill-considered use and redeems it from the chronic misapplication to which it has been subjected. When a product will stand daily wear and use for half a century—as many a Maple floor has done—it is entitled to write a new meaning into the definition of "Service."

Applied to an article that has withstood the wear and friction of such usage, the word "Service" takes on special dignity and character and becomes again a term of fine sincerity and well-poised discrimination.

One of the Maple flooring companies has its office in an old farmhouse in which the Maple floors have been laid for thirty-seven years and show little wear. Almost any architect or builder in the Middle West or the Northwest can show Maple floors which have been down more than twenty years and in some localities the investigator will be taken to Maple floors that have withstood constant wear for half a century. While Maple has a closer and more flinty fibre for example, than Beech, there can be no question as to the Service which Beech renders. Its toughness is traditional. Nearly all the Jack-plane bodies in the world are made of Beech. This tells the story of the ability of Beech to withstand intensive friction and keep its surface without a fleck or blemish. Many Beech and Birch floors which have been under daily use for twenty years are to be seen by those who require visual proof of their ability to give almost unlimited Service.

Maple, however, is the "big sister" of the beautiful hardwood flooring trio and admittedly sets the service pace and establishes the Service Standard.



The whole Maple flooring industry is a Service Idea—as that term is used by the more discriminating. Commercial Maple flooring, prepared for use at the mill, is a conspicuous and brilliant example of what intelligent, determined, and conscientious development of the principle of giving greater Service to the consumer will do for a product. The annals of American industry will not yield a more convincing example of the constructive force of the Service Idea intelligently developed than is to be found in the marvelous popularity, and the immense commercial vogue of Maple, Beech, and Birch flooring.

The start of this great Service movement which has made millions upon millions of feet of sanitary and almost indestructible Maple flooring available for the factories, stores, schools, and homes of America, is a most fascinating fragment of industrial history which can be sketched in few words.

While Maple floors had been demonstrating their remarkable resistance to wear and their capacity to give comfort under every form of use in the homes built by the sons of Revolutionary fathers, they were costly luxuries because the flooring had to be hand-worked until in 1885, when the Service Idea gave them commercial emancipation.

Early in the eighties the roller-skating rink craze struck this country and quickly demonstrated that the Maple floor was the only one that could withstand such grilling and intensive wear for any reasonable length of time.

But the task of dressing a flinty Maple floor with a Jack-plane is a back-breaking process from which the most energetic and ambitious carpenter inevitably shrinks. Here was the secret of why Maple floors were luxuries of the first order and only found where no other could be forced as a substitute. However, the roller-skating craze brought this to a sharp issue. Because the rinks must have this glassy, resilient, and virtually indestructible floor, and could afford to pay the almost prohibitive price for hand dressing, there was a sudden and insistent demand for immense areas of this floor. This demand could not be diverted. It had to be met and met quickly.

American resourcefulness has seldom failed in the face of a demand amounting in its urgency to a necessity. It did not fail this time.

Under this pressure the machines for making finished, ready-to-lay Maple flooring were developed. They took the backache out of finishing Maple, Beech, and Birch and sent the Jack-plane into happy retirement. This was the Emancipation Proclamation for the Maple floor. It made the installment of a great skating-rink floor an easier task than putting a tiny kitchen floor in a cottage had been under the Jack-plane Era of finishing.

This splendid stroke of Service to the consumer outstripped in its results the most ambitious dreams of its originators. Meeting the immediate and insistent demand for skating-rink floors was soon seen to be only an incident in its career. The fact that the way had been opened to

make the laying of a Maple, Beech, or Birch floor as easy as that of any softwood instantly changed the attitude of every local carpenter and builder in America towards the floor that had always been a lurking "terror" to lay and finish. The whole building fraternity suddenly changed from its attitude towards this floor material that turned the edges of Jack-planes and put aches and crooks into the backs of those artisans who pushed them.

Under the old régime of hand finishing after laying, the quality of flinty hardness, which was the Supreme Service merit of Maple, operated unfailingly to prevent its common use because carpenters dreaded the hardship involved in its installation and because the cost of this slow and arduous hand-work was so great as to make a Maple floor a distinct luxury which few felt they could afford. Only the wealthy could see their way to using this virtually indestructible floor outside of their kitchens, where they felt that for sanitary and endurance reasons no substitute could be tolerated.

Putting an almost perfect finish on this glassy wood in the mill brought this cardinal merit of Maple's flintlike resistance to wear into high relief. From being a handicap to its use and popularity, it became a virtue.

In a word it has brought into the Service of humanity millions upon millions of feet of floors that will outlast the buildings in which they are laid and the generation of men who laid them. Hundreds of thousands of homes have had the comfort and the economy of the most sanitary and enduring floors that man has found since he felt the first desire for something better under foot than the damp earth of his cave home back in the stone age. Although the first machines for the making of finished flooring were remarkably complete and efficient in the quality of their workmanship, many refinements have since been perfected. A consistent and unrelaxing pressure for the improvement of quality is a notable characteristic of this industry.

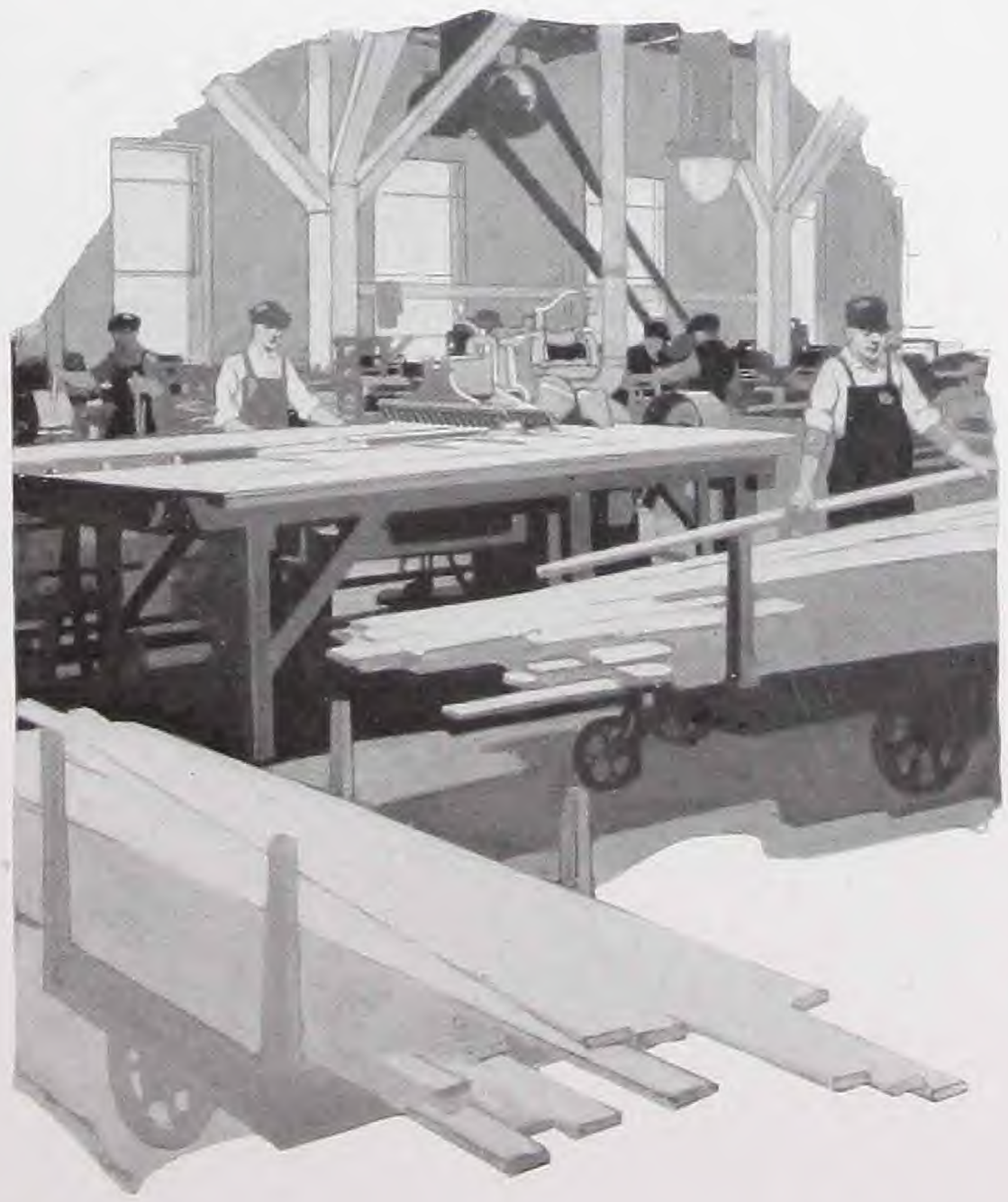
Identified Product and Organized Responsibility

WHEN you buy a bundle of Maple, Beech, or Birch flooring made in any of the Association mills of the Central West you may think that you are getting merely so many feet of a certain material product. Such an impression would fall far short of the facts. That measure of value would leave out of consideration one of the biggest and most vital returns for your investment.

One thing that is sold with every bundle of Maple, Beech, or Birch flooring is Organized Responsibility—not the ordinary general commercial responsibility which is merely an individual assurance, but the personally Identified Responsibility of the manufacturer, *plus something else*.

The Maple Flooring Manufacturers Association is the guarantor of the quality of every bundle of flooring put out by its members, and the Association is always available and always ready to discharge its responsibility and to fulfill its custodianship of quality to the architect, the dealer, and the consumer. The Maple, Beech, and Birch flooring from an Association mill bears the trademark of the Association and also a number to identify the mill from which it came. Look for the trademark **MFMA** and when you find it, you have a guaranty of the quality of the product—a guaranty of the standard grade established by the Association. Few, if any, products are manufactured with a finer application of the principles of productive economy than **MFMA** flooring.

The automatic machines which take the rough lumber and transform it into polished strips are marvels of ingenuity and of economical action. These fascinating devices cut the cost to the consumer while they are cutting grooves and tongues, planing, polishing, and shooting pieces from one machine to another with almost the rapidity of machine guns.



A Floor for the Front of the House

MAPLE flooring has lately passed one of the most important milestones in its long history of sturdy service to humanity. Speaking in a commercial sense, it has turned a sharp corner of its career and found itself welcomed into places where something besides supreme ability to withstand wear is demanded, where it must meet competitors on the score of beauty and conform to standards of appearance as well as utility.

This broader and finer appreciation of its merits as a floor for homes, ballrooms, theatres, recreation halls, and hospitals is the belated flower of a long and patient educational process. This slow educational growth, however, will be hastened and forced to a final fruitage by those war influences that are reshaping standards in every line and product and are everywhere enforcing recognition of the intrinsic attractiveness of simplicity, service, and economy. Maple flooring is a product which reflects in its refined appearance and enduring fibre those practical virtues and sturdy qualities which make it a marvel of Service.

Whatever may be the influence which has brought about this change, there can be no question that it is here and that Maple flooring is entering upon an era of wider use in homes and all other places where appearance must be considered as well as cleanliness and ability to withstand wear.

To some extent this appreciation has always existed in the Northwest; today it is so common as to be almost general in that section. Minneapolis and St. Paul have many fine homes floored throughout with Maple—floors which have stood the appearance test as well as that of wear for almost half a century. These floors are not confined to kitchens, back halls, servants' quarters, and rooms where wear is the only quality considered; they are found also in those parts of the house where appearance is the prime consideration in the mind of the housewife at the moment when guests of known refinement and discriminating taste are expected.

Here, as floors for libraries, living-rooms, halls, dining-rooms, dens, bedrooms, music-rooms and ballrooms, Maple has withstood constant and critical examination for years—

and this in homes frequented by the best society of these alert and progressive cities. The unfailing verdict has been that Maple scores as high in point of good taste and attractiveness, no matter how conspicuously placed, as it has always scored in economy, cleanliness, resilience, and ability to withstand wear.

The multiplication of modern apartments in these and other cities has made the merits of the Maple floor familiar to thousands of families—for the superior sanitary and wearing qualities of the Maple floor have forced it upon the consideration of the apartment builder who must avoid too frequent floor renewal as the enemy of his investment. Today it would be comparatively difficult, in Minneapolis or St. Paul, to find an apartment floor of any other wood unless of Birch or Beech—and these are the full sisters of Maple and known to share her sterling characteristics in generous degree. The use of either of these sister woods as a substitute for Maple is a matter of color scheme, a detail of harmony with the general finish of the room.

Beech and Birch parallel the princess of floor woods and keep pace with her in the long and strenuous endurance tests in which she has won the world's flooring laurels. Where a capacity to receive a darker finish is required, Beech and Birch relieve and support the high favorite of the trio. This is the one point of preference which sometimes places one of her sisters before Maple. But this preference involves no unpleasant partiality, for they are grown on the same ground with Maple, have much the same cell structure and share her brilliant virtues. From every quarter of the country comes the sure indication that Maple flooring can no longer be kept within the confines of the kitchen. In that humble place it has given a service so supreme and unapproached that it has compelled promotion to the front of the house, to the rooms frequented by guests, to the spaces where appearance imposes its exacting standards. The early Eastern tradition that relegated the Maple floor to those portions of the domestic establishment where utility was the only demand has at last crumbled under pressure of the sheer merits of this refined and beautiful product, and Maple has forced its way to the front of the house.

Hardwood the Natural Material

WOOD is the only material of which a floor can be made that in every way is satisfactory. No other material or combination of materials serves so efficiently.

Nature is a generous provider and she has given us certain woods that will stand the test of human traffic—that can be made into flooring at reasonable cost—and that will give maximum comfort with attractive and inviting appearance.

What Floor Values Are

Floors to be permanently satisfactory must be resilient, sanitary, warm, and dry. They must have attractive appearance, and above all, must maintain a smooth,unbroken surface under the strenuous wear and grind to which many floors are continuously subjected.

It is evident, then, that the best floors for business buildings must give the longest service, look best under all conditions, and always be comfortable and wholesome.

These essential qualities eliminate the softwoods, which wear rapidly and become a repository for dirt and disease germs. They eliminate composition floors, which are cold, uncomfortable, and unsanitary. Composition floors being porous, absorb and retain dirt and moisture. They likewise eliminate those hardwoods which have a coarse grain and porous texture.

Consequently, the ideal material for best floors must be hard wood with a fine grain and close, uniform texture so that floors made of it will wear durably, keep smooth, and not become a menace to health.

Grades for Every Purpose

There is a specific grade of Maple, Beech, and Birch flooring for each of the various classes of buildings.

The Clear grade combines appearance and service of the highest degree, and is suitable for the better classes of buildings.

The grade of No. 1, or second quality, is made for service rather than for appearance, but sufficient attention is given to appearance to make this grade desirable and satisfactory for use in stores, schoolhouses, and similar structures, where a waxed or varnished floor is not required.

The Factory grade is suitable for factories, warehouses, machine shops, and other buildings of like character, and for wear, nothing better or more economical can be obtained at relative cost.

Full Value Flooring—A Permanent Investment

There is very little, if any, difference between the cost of the best softwood flooring and Maple, Beech, and Birch flooring. End matched Maple, Beech, and Birch flooring is a completely manufactured article and is laid without waste. This is merely one phase of the cost—the biggest advantage of the hardwood floors consisting in the fact that they are a permanent asset and outwear softwood floors many times over. Replacing worn out floors is both inconvenient and expensive.

Money invested in Maple, Beech, and Birch flooring is wisely invested against the years of service to come—no matter whether the buyer is interested in an office building, factory, warehouse, club, school, church, or home—for Maple, Beech, and Birch floors are serving all manner of structures the world over.

Gymnasium of Northwestern University, Evanston, Illinois—floored with M F M A flooring

A few types of the numerous Educational Buildings throughout the United States floored with M F M A flooring which gives the best service and satisfaction.

Maple—The Natural Floor

MAPLE is generally specified and used where the floor is subjected to very heavy traffic—for such maximum service as is required in office buildings, stores, passenger and freight elevators, factories, machine shops, schools, churches, gymnasiums, and similar structures.

In strength and wearing qualities Maple may be described as being of cohesive structure, or having the quality of wrought iron.

Hard Usage in Schools

Maple, Beech, or Birch is the logical material for school flooring—no other kind of flooring will conserve so well the health of those occupying schoolrooms.

These woods possess many distinct advantages. They are non-porous, consequently they absorb very little moisture and dry quickly after being scrubbed. Such floors are practically dust-proof; they are easy to clean, and the smooth surface offers no shelter for germs.

The schoolroom floor of these woods is warm, dry, and *resilient*. Such floors are not easily set on fire.

They afford the most secure anchorage for schoolroom furniture. Because of its structure, it is not possible to wear through or loosen a layer of a strip of Maple, Beech, or Birch flooring, for there are no layers to loosen, peel, or splinter—factors that again contribute to the use of this life-lasting material in gymnasiums.

There is very little difference between the cost of first class MFMA floors and floors made of the better qualities of other woods, but there is a very great difference in the quantity and quality of the service they give. After the schoolroom floor is laid, nothing further need be done to it.

This photograph shows the comparative condition of softwood and Maple after eighteen years of service. The floor was subjected to the same traffic conditions—notice the striking difference between softwood on left and smooth Maple on right.

How Maple Outwears all Other Materials

A conspicuous example of the merits of Maple for schoolroom floors is shown by the record of service given by the various kinds of flooring materials used in the East High School at Minneapolis.

The steps leading to the entry are Bedford stone; the entry is paved with vitrified tile; slate stairs lead to the hall which is floored with Maple. They were put down in 1900. All who use this entrance climb the stone steps, walk through the tiled entry, ascend the slate stairs before passing onto the Maple floor, so that each material has been subjected to the same traffic.

A recent examination showed:

The top stone step, Fig. 1, the one under the door, has been worn away about 1¼ inches.

The vitrified tile in the entrance, Fig. 2, is chipped, cracked, and broken, a number of the tiles having been replaced with concrete.

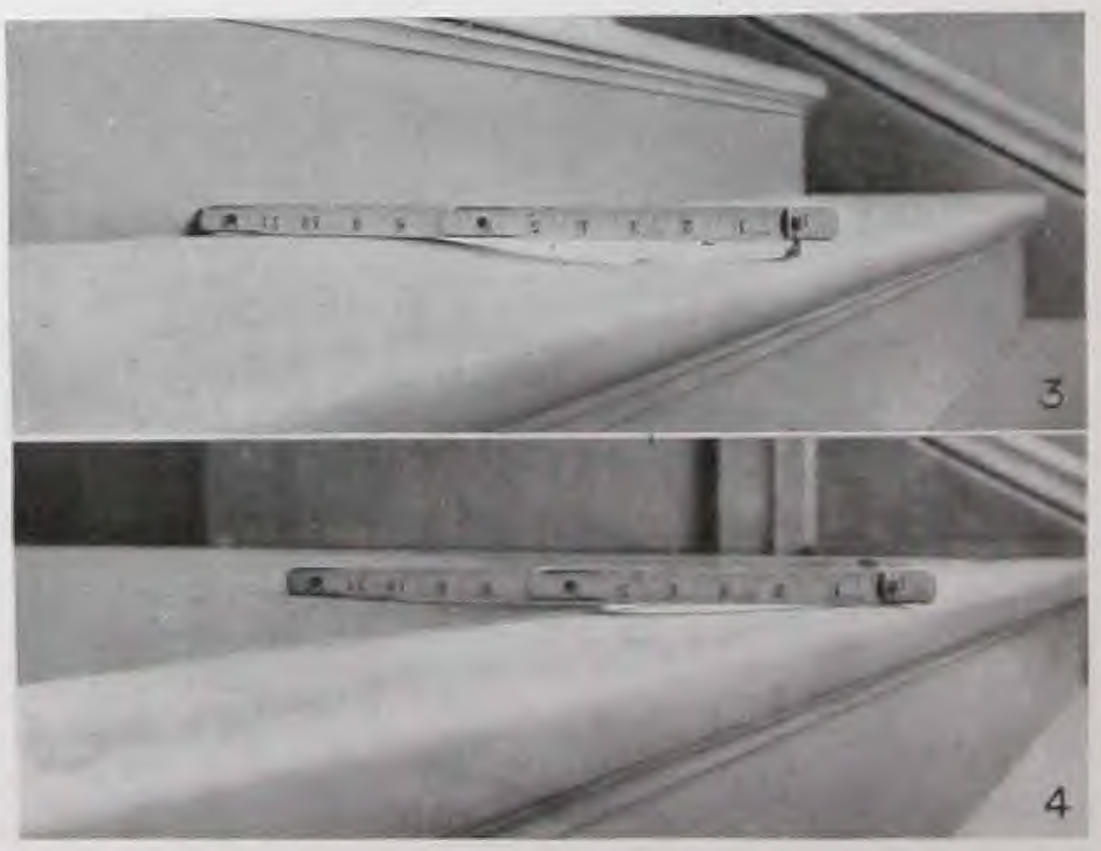
The slate steps, Fig. 3, are worn down about ¾ of an inch.

The Maple floor, Fig. 4, shows very little wear, even on close examination. The scuffling feet of restless Young America have merely served to give the Maple floor a polish. Many other convincing examples of the value of Maple as a "Service floor" could be cited.

One of the Hardest Tests of Durability

Maple is ideal flooring for such hard usage floors as are required for the modern dance hall—such as the Arcadia in Detroit.

Of famous durability and toughness — combined with highest degree of abrasive resistance — Maple floors give almost indefinite service.



Hardwood Floors for the Home

MAPLE, Beech, and Birch flooring is now used in practically every civilized country—the demand having increased steadily as its merits and advantages are becoming better understood and appreciated.

Complete Sanitation

The modern hardwood floor is the result not only of a long process of evolution, but also of a distinct betterment in our way of living. The carpets of our ancestors were breeding places of disease. Certainly no woman who knows hesitates in her choice between carpets and hardwood floors with rugs when household work is considered—so both the desire for more healthful home fittings and a human desire to save work have combined to hasten the present era of the hardwood floor.

M F M A *Flooring in Fine Apartments*

Many of the finest apartment houses in America are floored throughout with M F M A hardwoods—itself an excellent guide for the prospective home builder. The man who builds an apartment building does so as an investment purely.

He knows that his apartments will not be filled year in and year out unless they are fitted up with all the modern appointments people insist upon today. As a natural consequence of catering to this desire for handsome appearance in furnishings, the apartment builder has turned to hardwood for his flooring. He has done this willingly. He knows —by test—that Maple, Beech, and Birch floors are not only handsome —not only offer less of a labor problem in taking care of them—but really *cost less* eventually than other woods.

MFMA
TRADEMARK

Representative homes in which the floors for the front of the house were made of MFMA flooring.

The charm and character of MFMA floors are an essential feature in thousands of American homes.

Maple for Public Floors

WHEN an architect is planning a great public building and its immense assembly hall, he knows that he can safely specify Maple for the flooring. He knows that such a floor will stand up under long years of the hardest usage, retain its good appearance, and can be easily taken care of.

Endorsed by Architects

Your architect will tell you that Maple is universally esteemed for its durability, toughness, and strength—compression, shearing, tensile, torsional, or transverse—and that all are combined with the highest degree of abrasive resistance.

For Office Buildings

Office buildings and public structures all over the country have Maple flooring which has stood up successfully for twenty years and more—none the worse for wear—containing no unsightly lumpy spots, ridges, or depressions.

Further on in this book will be found the simple directions and suggestions for laying and caring for Maple, Beech, and Birch floors.

Flooring the Factory

Floors for factories, warehouses, and similar buildings must stand heavy traffic and hard usage, and they should be sanitary and comfortable to work on.

M F M A flooring is unquestionably best for floors that are subjected to hard and constant use. In factories, it has been conclusively demonstrated that under the hardest sort of usage it will long outwear any other wood on account of its close grained structure.

Floors made of Maple, Beech, or Birch will last longer under normal conditions than concrete or other substitutes.

In factories the slight abrasion of these woods by foot or truck wear does not produce a dust which will irritate the eyes or lungs of workmen or injure the delicate bearings of machinery. They do not absorb and retain dirt and moisture like other floors and are therefore more sanitary. They can also be repaired with less trouble and expense and are less tiresome to work on. Where a low priced floor is wanted for good wearing qualities, nothing more economical or more practical can be obtained.

Cotton mills, sugar mills, and factories of all kinds all over the country, use M F M A flooring because of its proven greatest resistance to wear.

Laying MFMA *Flooring Over Concrete Floors*

PROMINENT users of *concrete* floors for industrial purposes have found it necessary to re-floor with Maple, Beech, or Birch. Concrete floors are cold, hard, and increasingly dusty with each year's use—highly objectionable features in a factory floor.

By laying MFMA flooring over concrete floors, this hard, uneven surface is replaced by resiliency and a permanently even surface and at the same time the floor is made sanitary and free from dust and grit.

By this simple method lifetime service is assured and unsatisfactory flooring replaced by maximum wearing qualities, and sanitat on.

For factory floors MFMA flooring has won its way by intrinsic merit based upon comparative cost and durability.

Unaffected by Heaviest Trucks

Traffic over the factory floor of today is as heavy as on many famous city thoroughfares.

Heavy material is being constantly rolled back and forth on trucks that would soon make a wreck of softwood or concrete flooring. Few modern factories depend upon the lightly loaded hand truck today—the majority using the time-and labor-saving four wheel trucks—hand or power—carrying large loads and taxing floor resistance.

Where you find these trucks, you ordinarily find Maple flooring, especially if the factory has been erected within the last ten years.

Particular attention is called to the work of this Association which has resulted in reducing the cost of laying factory floors to a minimum. As described in this book, the flooring is side and end matched, ready to assemble, making practically a one-piece floor in which there is little, if any, waste material.

Two Important Features

Maple, Beech, and Birch floors are not easily set on fire—an essential feature in their favor for factory installations. Another important feature is that they afford a stable anchorage for factory equipment.

From coast to coast, modern Public Buildings utilize M F M A floors because they give the longest service, look best under all conditions, and are always comfortable and wholesome.

Maple, Beech, and Birch Flooring—Characteristics and Grades

THE best Maple, Beech, and Birch floors cost very little more than the better classes of softwood floors. The slight difference in cost is more than offset by the great difference in wearing and appearance values. Because of their fine characteristics Maple, Beech, and Birch are favored flooring materials for the home. Beech and Birch possess warm and pleasing color tones. Maple is not a characterless wood as some have assumed it to be. When varnished or waxed, Maple has a beautiful golden-yellowish color which in time deepens to reddish gold. These woods are destined to grow into still greater favor as flooring woods for the home.

In addition to the standard grades of Clear, No. 1, and Factory, some manufacturers offer special grades of White Clear Maple and Red Clear Beech and Birch. This stock is selected for color, but in all other respects it is the same as the grade of Clear.

White Clear Maple is employed where unusually dainty effects are desired. It makes an exceptionally attractive floor for bedrooms.

In other cases the color scheme may demand the use of Red Clear Beech or Birch. Floors made of these special grades of Maple, Beech, or Birch flooring should be waxed or varnished.

The Clear grade of Maple, Beech, and Birch shows some variation in color. To many lovers of woods this is an added attraction. This grade of flooring makes the most durable and best appearing floors for any building. Clear or first quality is suitable for apartment buildings, churches, clubs, dancing floors, gymnasiums, hospitals, hotels, office buildings, public buildings, residences, roller-skating rinks, schoolhouses, stores, and similar buildings.

The grade of No. 1, or second quality, is a common grade and its relation to Clear is similar to that between second and first grade of finish. It is just as serviceable as Clear and equally as desirable when there is no objection to the appearance, and it can be used in the same class of buildings as the Clear grade at a material saving in the cost of construction.

The Factory, or third grade, will give excellent satisfaction in factories, creameries, granaries, mills, warehouses, workshops, and in other buildings, at mines, on farms, etc. Where a low priced floor is wanted for wear, nothing better than this grade can be obtained at relative cost.

Comparative Wearing Qualities

Tests observed show the following comparative values for wearing qualities, under practically the same conditions, of woods used for flooring:

First—Maple
Second—Beech and Birch
Third—Oak, Quarter-sawed
Fourth—Yellow Pine, Quarter-sawed
Fifth—Fir, Quarter-sawed
Sixth—Oak, Plain-sawed
Seventh—Yellow Pine, Plain-sawed
Eighth—Fir, Plain-sawed
Ninth—Norway Pine
Tenth—White Pine

Thicknesses and Faces

Maple, Beech, and Birch, Matched Stock

Standard Thickness	Faces	Grades
$\frac{13}{16}$″	1½″ 2″ 2¼″ 3¼″	CLEAR, NO. 1, FACTORY
Special Thicknesses		
1$\frac{1}{16}$″ 1$\frac{5}{16}$″ 1$\frac{11}{16}$″	2″ 2¼″ 3¼″	CLEAR, NO. 1, FACTORY
⅜″ ½″ ⅝″	1½″ 2″ 2¼″	CLEAR and NO. 1 only

Standard Measurement

⅝″ and thicker, all faces, is measured ¾″ waste for matching.
½″ and thinner, all faces, is measured ½″ waste for matching.
Jointed Flooring, all thicknesses and faces, is measured ½″ waste.

To Ascertain Quantity Required

To ascertain the number of feet of matched flooring required to cover a given area, find the number of square feet of floor space to be covered and add thereto the following percentages:

Matched Stock	⅝″ and $\frac{13}{16}$″ Thick	⅜″ and ½″ Thick
1½″ Face Flooring	50%	33⅓%
2″ Face Flooring	37½%	25%
2¼″ Face Flooring	33⅓%	22½%
3¼″ Face Flooring	24%	not made

Uses of Different Thicknesses and Faces

Thicknesses

The $\frac{13}{16}$-inch thickness of Maple, Beech, and Birch flooring is most commonly used. It can be laid directly on the joists, or on strips embedded in cement when the latter is used for fire-proofing, but is more frequently laid on a subfloor. For ordinary purposes a diagonal subfloor made of softwood boards, surfaced one or two sides, is sufficient. This may be used for the work floor during the progress of building and the hardwood floor should not be laid until the building is dry.

For factories and warehouses where greater strength and slow burning construction are required, the subfloor should be made of matched softwood 1¾ inches thick.

The 1$\frac{1}{16}$-inch thick hardwood flooring is sometimes preferred when the floor is to be subjected to extraordinary strain, but the $\frac{13}{16}$-inch is suitable for general purposes.

The ½-inch thickness is suitable for apartment buildings, churches, clubs, offices, and similar buildings. Under ordinary foot wear it is as serviceable as the $\frac{13}{16}$-inch. If the subfloor is uneven, the ½-inch flooring will produce more satisfactory results than the ⅜-inch thick.

The ⅜-inch is the most popular thickness under $\frac{13}{16}$-inch. It is superior to parquetry because the sides and ends of the flooring are matched so that it can be laid with the nails entirely concealed, and they cannot work out. It is suitable for residences, apartment buildings, offices, churches, etc., where both its appearance and utility are important. Factory $\frac{13}{16}$-inch Maple, Beech, or Birch makes an ideal subfloor for the ⅜-inch.

In buildings like these, where traffic and wear are heaviest, MFMA flooring has demonstrated its superiority over all substitutes.

Faces

In $\frac{13}{16}$-inch and ½-inch flooring, the 2¼-inch face is usually preferred and in the ⅜-inch the 1½-inch face is a happy medium. Narrower faces require a larger quantity of flooring to cover a given area and the labor cost of laying is greater, but the resulting floor is worth the additional investment when one is looking for something better than ordinary. The wider faces are not so desirable in appearance but usually cost less for material and labor.

Jointed Flooring

Jointed or Square-Edge flooring is used in factories, mills, warehouses, and other places where the wear is rapid and continuous. In cotton, silk, and paper mills the flooring under the machines receives no wear, but in the alleys and runways the wear of the trucks is excessive. This style of flooring has no tongue or groove on the sides and the pieces which wear out can be quickly and easily replaced. It may be either end-matched or butted. The nails are driven through the face of the piece and the heads countersunk.

Thicknesses

The standard thicknesses are $\frac{13}{16}$-inch and $1\frac{1}{16}$ inches. In modern factory construction a Maple, Beech, or Birch wearing floor is laid over a heavy pine, spruce, or hemlock subfloor. Economy is attained in certain cases by using $1\frac{5}{16}$-inch or $1\frac{11}{16}$-inch matched Maple to eliminate the subfloor.

Faces

The standard faces or finished widths are 2½ inches, 3½ inches, and 4 inches. The 3½-inch and wider flooring is usually manufactured with a double groove in the back. This is intended to resist the tendency of wide flooring to curl at the edges. The 3½-inch face is more generally used.

Measurement

Jointed flooring is measured as the rough lumber from which it is made, ½-inch being added to the face for waste in ripping and dressing to size. For example, $\frac{13}{16}$-inch x 3½ inches is measured 1 inch x 4 inches.

Care After Leaving Factory

Hardwood flooring is air-seasoned and thoroughly kiln-dried and it should not be exposed to dampness. The same care which the manufacturer uses to keep it dry should be continued after it leaves the factory.

Don't unload it in damp weather.

Don't store it in newly plastered buildings.

Don't store it in an open shed with one end exposed to the weather—the exposed ends will absorb moisture and swell and become wider than the ends which are not exposed to the weather.

Don't take less care of it than you would of interior finish.

Laying New Floors Over Old

A General Use for Thin Flooring

The wonderful progress which has been made during recent years by manufacturers of hardwood flooring, and their persistent effort to acquaint the public with the merits and desirability of hardwood floors for houses, as well as industrial, commercial, and public buildings, have resulted in a like wonderful progress in the use of hardwood floors in the modern home. Women favor hardwood floors when they know how much they add to the appearance of a room at a moderate cost and that they are sanitary, durable, and easily cared for. The idea of modern hardwood floors has become so general that a home without them is no longer considered modern.

Many houses were built before modern hardwood flooring was available. To tear up the old floor and relay with $\frac{13}{16}$-inch thick hardwood flooring involves considerable inconvenience and expense. Nor is it desirable to lay the thick hardwood upon old floors, as it would necessitate a readjustment of interior woodwork.

Thin hardwood flooring is designed to meet these conditions. It is just a little thicker than a good carpet and can be laid upon an old floor without disturbing or mutilating the interior woodwork. This flooring is matched on sides and ends and the nails are concealed and cannot work out to the surface of the floor.

Good flooring may make a poor floor if it is not properly laid and finished. It is just as possible, however, to have the work done correctly and this explains the method of doing the work so that satisfactory results may be obtained.

The Under Floor

In new houses the subfloor, or under floor, should be made of well-seasoned, matched flooring laid diagonally. If made of pine, hemlock, spruce, fir, or other softwoods, the dimensions of the flooring should be $\frac{13}{16}$ x 3¼-inch face. Nothing wider than 5¼-inch face should be used and the narrower face is better in the long run because it will make a firmer and more even subfloor which will stay in place better under the varying changes of atmosphere and temperature.

A superior subfloor for thin hardwood flooring, may be made of MFMA $\frac{13}{16}$-inch Factory grade, which is thoroughly kiln-dried, matched on sides and ends, and steel scraped. It makes a tight, solid, non-vibrating subfloor with an even surface if kept dry. It is the ideal under floor for thin hardwood flooring. Complete the roof before putting in the subfloor. The temporary inconvenience in doing this is offset many fold by the permanent investment of better floors which will increase the value of the property.

In houses which are not new the thin hardwood flooring is laid upon the old floors. Thousands of homes have been modernized in this way. The old floors have some advantages for this purpose in that they have become thoroughly seasoned with the house and are well settled in their place. Any irregularities in the surface of the old floors should be planed off. The thin hardwood top floor is in effect a substantial veneer, and it should have as smooth and even a support as possible.

Be sure that the subfloor is properly nailed. For the $\frac{13}{16}$-inch hardwood subflooring use an eightpenny cut flooring nail.

Selecting the Flooring for the Top Floor

The moderate prices of thin Maple, Beech, and Birch flooring put it within reach of every householder and if properly cared for, it will last as long as the house. Dressed with rugs that can be easily removed and cleaned, a hardwood floor greatly improves the appearance of a room and leaves no excuse for dirt, carpet bugs, moths, disease germs, or housecleaning discomforts in the modern home. Merely as an investment it enhances the value of property more than its original cost. Carpets are an expense; hardwood floors are a permanent asset.

The increasing attention which is being given to the decorative treatment of a room makes it desirable to select the hardwood flooring with that end in view. An important point to be considered in selecting hardwood flooring is the color scheme of the woodwork, wall dressing, and furnishings of the room. In a general way it may be said that the floor is the decorative foundation and that the treatment of the side walls should be lighter than the floor, as the ceiling is lighter than the walls. For illustration, a White Maple floor will harmonize with white or lightly tinted woodwork and lightly treated walls. Or with the same walls and floor the woodwork may be stained dark, like mahogany, if the room is not wainscoted. But if the walls are dark, the White Maple floor would not harmonize. If the walls are dark with hues of reds or browns, the floor may be Red Beech or Red Birch, or Plain Beech or Birch may be stained to desired color and shade as explained on page thirty-nine. **M F M A** thin flooring is manufactured in a variety of woods, grades, and selected features to meet the varied requirements of the home builder.

The ⅜-inch is the most popular thickness and the 1½-inch, 2-inch, and 2¼-inch are the standard faces.

Directions for Laying the Flooring

IT is not difficult to lay or finish Maple, Beech, and Birch floors—hundreds of floormen have worked out methods that produce results in every way satisfactory—this is proven by the thousands of hardwood floors now in use everywhere. But it should be borne in mind that good flooring may make a poor floor if it is not properly laid and finished.

For the under floor use sound softwood matched stock or the Factory grade of Maple, Beech, or Birch flooring and lay it diagonally or at right angles to the proposed run of the top floor. Hardwood makes the best subfloor, but must be kept dry.

If the top floor is to be laid directly on the subfloor—or with only deadening felt between—nail all twisted, cupped, or broken members of the subfloor securely in place, so that a substantial and even surface will be secured.

In some buildings the hardwood flooring is laid on furring strips. If that method is called for, the face of the strips must be lined up accurately.

Buildings Must Be Dry

Do not permit Maple, Beech, or Birch flooring to be delivered until the building, including the plaster, is thoroughly dry. Occasionally the flooring is much dryer than the building and absorbs moisture, which causes the strips to swell before they are laid. When heat is applied the surplus moisture is driven off, the strips shrink, and cracks appear.

Dry flooring laid in a damp building will swell and cause "cupping" or "buckling." The only remedy for a cupped floor is to scrape it to a true surface. It is almost impossible to drive a buckled floor back into place, the nails tending to support it in the position into which it was forced. The alternative is to take up the flooring and relay it. Wait until the building is dry and have a perfect floor.

When to Begin Work

The proper time to lay Maple, Beech, or Birch flooring is when the building, including the plaster, is thoroughly dry and right after the interior trim has been installed and finished.

If work must be started before that time the floor should be primed as soon as possible after it is put down. When the primer is hard, cover the floor with sized building paper. The primer will keep out the dirt and also tend to prevent the absorption of moisture.

Dipping the flooring strips in raw linseed oil, heated as nearly as possible to the boiling point, will safeguard them effectively from moisture. Flooring so treated may subsequently be waxed or varnished.

Dipped flooring has been used with excellent results in reflooring buildings in use. Three or four days should be allowed to insure thorough absorption of the oil.

Laying the Floor

If the trim is in place line up the first course of strips flush with the face of the mopboard, which must not extend below the surface of the top floor. Do not,

under any circumstances, drive the flooring tight against studding or walls. Nail the first course directly through that portion to be covered with the quarter round or base shoe.

Plan in advance to meet the situation where the floor continues into other rooms. Thresholds are little used now and the courses of flooring strips should run true from one end to the other, regardless of the number of rooms through which they pass.

Ordinarily, the floor in the center of the room is covered with rugs. Select the choice strips for the sides and ends which form the exposed portions and which are always in view.

Use a block to drive the strips together or to drive them endwise. Do not batter the tongue, injure the matching, or mar the surface.

Economy of End Matched Flooring

The flooring is furnished in mixed lengths, which facilitates rapid laying, as it enables the workmen to combine the lengths economically and avoids unnecessary waste in cutting. The shorter lengths are particularly handy in this respect as they fit in readily and can be driven together quickly with a tap of the hammer.

When necessary to trim a piece of flooring to finish out a course, it is better to use a piece of sufficient length so that the part trimmed off may be used for starting a new course. This is an economy which will suggest itself to competent floor-layers.

Do not start to nail until the strip is in place. It is unwise to rely wholly or largely on the nails to draw the strips together. Damage to tongue makes it difficult to enter the groove of the next piece.

The Proper Nails to Use

It is very essential that the proper nails be used in laying hardwood flooring to prevent splitting the tongue and bruising the face. For the best results the following are recommended:

Threepenny finishing nails for $\frac{3}{8}$-inch thick, used 9 inches apart.

Eightpenny cut flooring nails for $\frac{13}{16}$-inch thick, used 16 inches apart.

Tenpenny cut flooring nails for $1\frac{1}{16}$-inches thick, used 16 inches apart.

The threepenny is a wire nail and on account of the small gauge and medium length is best adapted to thin flooring.

The eightpenny and tenpenny are steel-cut nails, manufactured especially for laying hardwood flooring and are being used by up-to-date contractors and floor-layers. These nails are the same thickness from point to head and have two smooth sides which are set parallel with the tongue, eliminating the strain from the narrow part of the tongue. They are wedged shape in width, which puts the entire strain lengthwise of the tongue. The rough edges give these nails drawing and holding qualities not contained in any other nail, and after being driven their entire length they remain in position, producing and maintaining a perfectly tight joint.

The nails should be driven at an angle of 45 to 55 degrees, and the first nail or two driven in the piece of flooring should be "toe-nailed" toward the preceding piece to which it joins.

Figure No. 1 shows the threepenny finishing nail in the position it should be held in starting, and Fig. No. 2 shows the same nail after being driven its entire length and set.

Figure No. 3 shows the eightpenny cut flooring nail in the position it should be held in starting, and Fig. No. 4 shows the same nail after being driven its entire length and set.

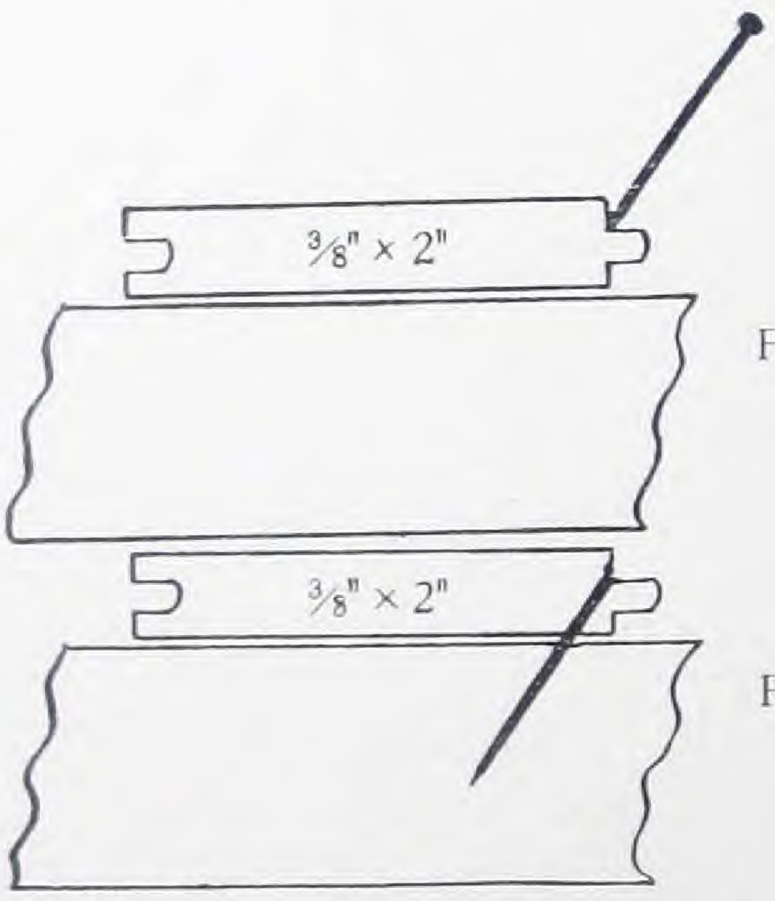


Fig. 1

Fig. 2

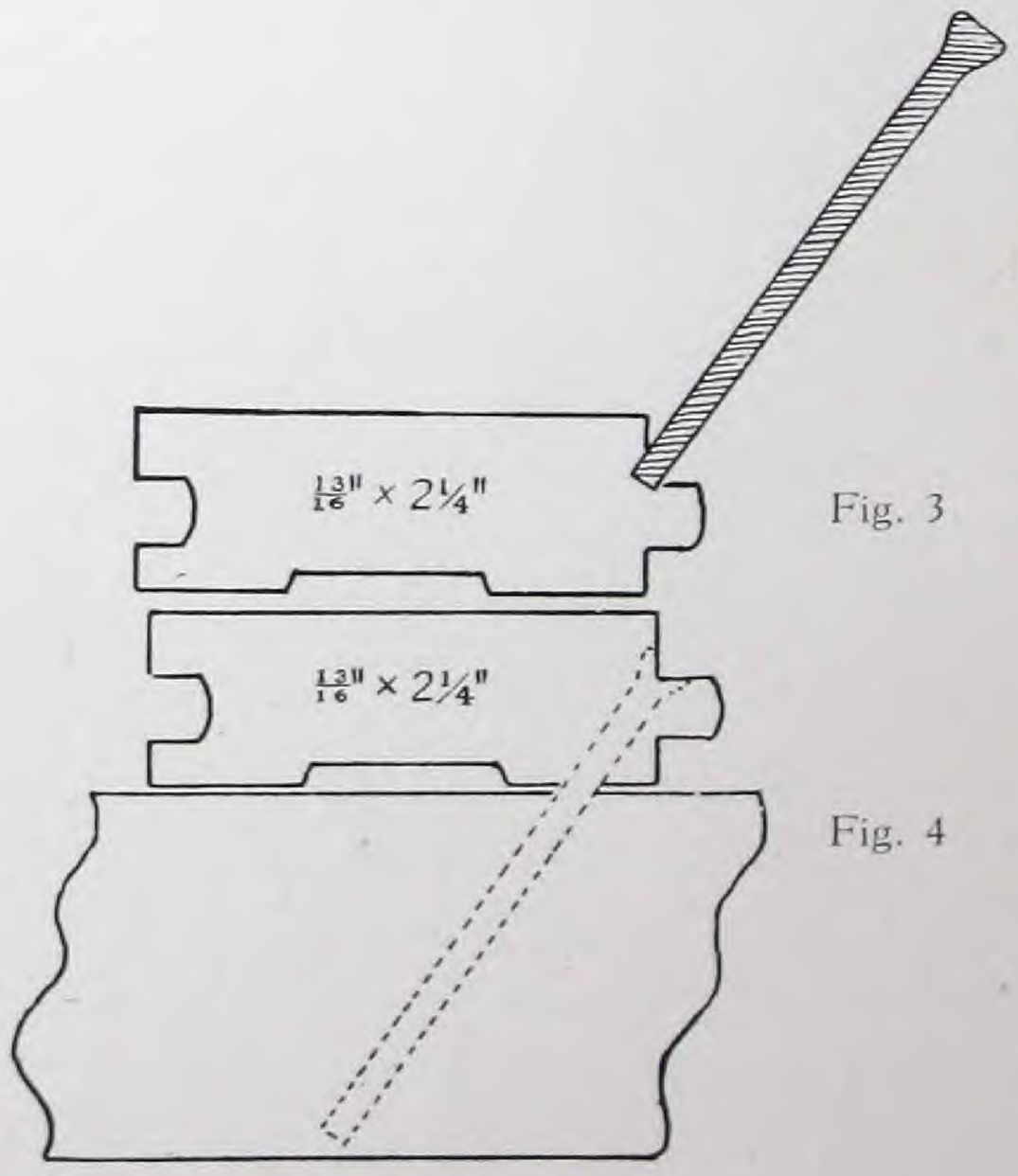


Fig. 3

Fig. 4

A few of the many buildings which are floored throughout with MFMA flooring. Such floors in stores withstand years of hard usage, and maintain a smooth, unbroken surface.

The Proper Methods of Finishing Hardwood Floors

THE finishing processes recommended by this Association are the result of considerable investigation. We found that each of the competent flooring contractors had a personal preference for his own method of finishing Maple, Beech, or Birch—a natural result of the pride they take in their handling of these fine woods.

Our problem has been to standardize these various methods so that a generally accepted formula for finishing could be evolved for the benefit of home owner and contractor alike.

By following these suggested methods, any flooring contractor can finish hardwood flooring so that full surface and color values are realized.

Pleasing effects—complete color harmony—and durability of finish are certain when the good workman follows these simple directions.

Scraping

After the hardwood floor is laid, it should be scraped and sandpapered to a smooth surface. This scraping should be done with a sheering cut lengthwise of the grain. Then sweep the floor clean and wipe carefully with a soft cloth *until all dust is removed.*

MFMA *Formula for Wax Finishing Beech and Birch*

Natural Finish: *First*—Fill with wood alcohol and light colored umber mixed to the consistency of thick cream, and rub thoroughly into the wood. Never use benzine, which evaporates and may discolor. Wood alcohol, originally from the wood itself, *penetrates* hardwoods. *Second*—Apply two coats of alcohol shellac and rub each coat well when dry. *Third*—Apply one coat of linseed oil and pumice stone and rub well. *Fourth*—Apply one coat of equal portions of wood alcohol and turpentine mixed and rub well. *Fifth*—Apply three or four coats of light colored floor wax, rubbing each coat thoroughly before applying the next. If an even colored finish is desired put a little cherry stain in the filler.

Special White Finish for enameled bedrooms and bathrooms: *First*—Fill with wood alcohol and best quality white lead and rub thoroughly into the wood. *Second*—Treat same as above.

MFMA *Formula for Wax Finishing Maple*

Natural Finish—White Clear: *First*—Fill with umber and best quality white lead thinned with wood alcohol mixing to the consistency of thick cream, and rub thoroughly into wood. *Second*—Apply two coats of alcohol shellac and rub well. *Third*—Apply one coat of linseed oil and pumice stone and rub well. *Fourth*—

Apply one coat of equal portions of wood alcohol and turpentine mixed and rub well. *Fifth*—Apply three or four coats of light colored floor wax, rubbing each coat thoroughly before applying the next.

Clear: Finish same as White Clear, unless an even color is desired; then mix a little gray umber in the filler.

Staining Maple, Beech, and Birch

The most successful process for staining Maple consists in using a filler of wood alcohol and best quality white lead stains, going in with this filler. Rub thoroughly into the wood.

Follow this process for Beech and Birch, which take stains admirably, but a thin, transparent stain should be used that will color the wood without obliterating its character. Try out on small surface, to see that you have gained the right color.

Applying Stains Direct to the Wood

Oil stains are recommended when a stain is to be applied direct to the wood. Oil stains do not set quickly and give the operator longer time in which to work. The color should be worked into the wood and not allowed to remain on the surface. Rub off to an even tone before the stain hardens.

Varnished Floors

A satisfactory method of varnishing Maple, Beech, or Birch floors is to thin the varnish by adding turpentine, the quantity to be added varying from 10 to 30 percent, and applying the varnish thus prepared directly to the wood.

When dry and hard, sandpaper lightly with No. 00 sandpaper to remove the small air blisters; wipe clean and give a coat of full body varnish just as it comes from the can. A third coat should be given in the same way and rubbed down with pulverized pumice stone and rubbing oil. Then the floor should be wiped dry and clean, removing all the oil.

Varnish does not dry so well at night, with or without artificial light, as in the daytime. Ventilation, temperature, and light are important.

Windows should be open to insure ventilation.

Important: Do not use liquid fillers or shellac under varnish. The floor must be dry and clean before a drop of finishing material is placed on it. Temperature should be between 70 and 80 degrees.

Portions of varnished floors subjected to excessive wear may be renewed if the work is undertaken before the wood is exposed and turns dark.

Such portions should be cleaned with white soap and water and a thin coat of varnish applied. This should be rubbed well, then coated with full body varnish and rubbed down to correspond with the remainder of the floor.

Finishing the Service Floor

IT is a good investment to give the industrial—or service—floor a hot oil treatment when laid. The most efficient way is by dipping the flooring strips in raw linseed oil, heated as nearly as possible to the boiling point. This is generally done by the installation of a large tank on the grounds and any competent flooring contractor can do this. A good grade of linseed oil should be used. Three or four days should be allowed for thorough absorption of the oil. The usual treatment, however, consists in coating the floor, immediately after it has been laid, with raw linseed oil, the oil being heated as nearly as possible to the boiling point and applied with a mop while hot.

Commercial preparations for floors in public buildings, factories, office buildings, churches, stores, etc., are frequently used instead of this hot oil treatment.

There are several such preparations on the market which are easily applied to the newly laid floor and the Association will furnish manufacturers' names upon request.

Keeping Hardwood Floors in Good Condition

The amount of attention required to keep a hardwood floor in order depends wholly upon the use it is subjected to. All floors should be gone over from time to time and touched up.

In the regular course of housecleaning, the housekeeper should remove the dust by pinning a damp soft cloth over an ordinary broom so that the dust will adhere to it more readily, but be sure to wipe dry with a dry cloth immediately afterwards. In case some dirt should adhere to the floor that the damp cloth will not remove, use some lukewarm water and soap, being particular to cleanse this off as quickly as possible and wipe dry. For removing stains, use a cloth saturated with turpentine or benzine.

If the finish is dull after giving it a thorough cleansing as recommended above, obtain, at a small cost, some floor reviver, saturate a cloth with it, wring it out half dry and rub the finish until the luster returns.

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Church floors made of MFMA flooring are sanitary, attractive in appearance, and give permanently satisfactory service.

Maple
Its Characteristics and Uses

THE Hard or Rock Maple is indigenous to our common country from Maine to Minnesota, but in the hardwood forests of the north, in the region of the Great Lakes, it attains its highest perfection in quality of timber, size, and symmetry, often reaching a diameter of three feet and rising sixty feet to the first limb. Individual trees on fertile soil occasionally reach one hundred and twenty feet in height.

The distinctive feature of the wooded landscape and the real "Queen of the Forest" is the Hard Maple.

The growth of Maple is slow, but from early spring until late fall this growth is steady and uniform. The outcome is a gradual wood growth, which accounts for its compactness, fine grain, and uniform texture.

The wood is tough, heavy, strong, dense, and very hard, will take a high polish, wear evenly, never shell, splinter, or disintegrate from ordinary uses in any manner whatever, and is extremely durable when not placed in contact with the soil. It has a breakage strength nearly equal to Hickory and in the form of lumber is employed extensively in the construction of agricultural implements, vehicles, furniture, and shoe lasts, its physical characteristics making it indispensable for such uses.

Because it possesses these qualities to a preeminent degree and has vital tenacity and ability to resist pointed pressure without abrasion, it is unexcelled for flooring and it is known to experts as having from two to three times the wearing tenure of other woods commonly utilized for flooring purposes.

During the past twenty years Hard Maple, as lumber, has developed rapidly until it is now the second in importance in the hardwood lumber industry of the country.

According to the United States Forest Service Reports, the total cut of Maple lumber in the United States in 1917 was 802 million feet board measure, of which Michigan and Wisconsin produced 504 million feet, or 63 percent.

Beech

Its Characteristics and Uses

IN full growth this beautiful tree is round-topped, with wide-spreading branches and shows a normal altitude of about sixty feet. In its forest form it often attains a height of 120 to 140 feet, with smoothly rounded bole as symmetrical as the pillar of a cathedral and with a diameter of two to four feet. The bark is light gray and remarkably smooth.

The wood is close-grained, hard, strong, and tough. The grain slightly resembles Oak in appearance. The color of the heartwood is reddish, the sapwood nearly white.

Representative uses of the wood are for inside finish and flooring where a beautiful color is sought and for carpenters' planes, tool handles, etc., where a strong, smooth surface is desired.

The physical qualities and appearances of Beech and Maple are so similar that Beech flooring can be used where Maple is intended. Beech is frequently preferred to Maple when certain artistic effects are desired, because its color is of a darker and warmer hue and as its grain is more open it takes and retains a fine stain and finish.

According to the United States Forest Service Reports the total cut of Beech lumber in the United States in 1917 was 278 million feet board measure, of which Michigan and Wisconsin produced 63 million feet, or 23 percent.

Birch

Its Characteristics and Uses

THIS tree is known as Black Birch, Cherry Birch, and Sweet Birch and is one of the best known and most highly prized natives of the northern forests. It is round, with slender branches, and in height ranges from thirty to ninety feet, with a diameter of two to four feet.

Its bark is dark brown and smooth when young, but rough as the tree grows old. The grain is close, the structure compact, and the wood heavy, strong, and hard, taking stain and a high polish very readily.

Representative uses of Birch are for furniture, interior finish, doors, veneers, and flooring.

Because of its fine physical characteristics and color and because it lends itself readily to staining in imitation of mahogany, it has become a great favorite with the furniture-maker. For interior finish it is becoming very popular in this country and abroad. Its rich, cheerful color and ability to hold color, as well as its durability, make it a favorite for doors and trim.

There is a certain sheen to Birch that is possessed by few woods; under a smooth and perfect finish it has a sparkling luster, due to the grain and linings of the pores. It makes a most beautiful, artistic, and durable floor.

According to the United States Forest Service Reports the total cut of Birch lumber in the United States in 1917 was 387 million feet board measure, of which Michigan and Wisconsin produced 271 million feet, or 70 percent.

"Trademarking and Advertising Are Twin Pledges of Good Faith"

The trademark **MFMA** on flooring is a guaranty of its quality supported by the organized responsibility of the Maple Flooring Manufacturers Association. It has been adopted as a means of identifying Association flooring by the architect, dealer, and builder.

The present Maple Flooring Manufacturers Association is the direct descendant of the original Association established many years ago. It inherits all the knowledge, skill, and experience—all of the development—since the inception of the industry. The work of the Association has always been constructive and to it is due the present excellence of the flooring. Outside the Association there is no teamwork for improving the methods of its manufacture and sale.

It logically follows that the highest type of efficiency in manufacturing is to be found in the Association. Having originated the industry, its members have maintained their lead over all others.

Uniformity in grades, dimensions, and measurement of the flooring has been accomplished by the work and at the expense of the Association and it could not have been brought about in any other manner. Progress in the industry is due to Association effort.

To one who is not familiar with all the numerous kinds of hardwood flooring, the selection of the size, grade, and wood best suited for each particular purpose, at the lowest necessary cost, is not an easy undertaking. Whenever you would like such information or have other flooring problems to solve, let us know the particular purpose for which the flooring is wanted and we will endeavor to be of practical service to you.

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TRADEMARK

Recapitulation

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